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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,665	04/14/2004	Robert Haas	CH920020014US1	7531
7590 04/16/2008				
Louis P. Herzberg Intellectual Property Law Dept. IBM Corporation P.O. Box 218 Yorktown Heights, NY 10598				
EXAMINER				
KANGARLOO, RAMTIN				
ART UNIT		PAPER NUMBER		
2619				
MAIL DATE		DELIVERY MODE		
04/16/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,665

Applicant(s)

HAAS, ROBERT

Examiner

RAMTIN KANGARLOO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/14/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cortez et al.(U.S. Patent No.7130262).

Regarding **claim 1 and 14**, cortez discloses a method comprising optimizing a data path and forwarding data from a start node to an end node over a network, wherein the network comprises first nodes (Fig. 1, 16), each first node being capable to perform one or more first node functions (choose one of the existing paths in order to forward the data) wherein one or more of said first node functions are to be applied on said data while forwarding said data through the network (forward the data after select the path) wherein a number of data path options through the first nodes are determined, for each data path option, the first nodes, having one or more assigned

first node functions (See col.3, lines 50-55) wherein a first capacity value for each of said first nodes and for each of said first node functions and/or combinations of said first node functions are provided (col.4, lines 9-10); and wherein the data is forwarded through the data path which is determined by the data path option having a minimum overall capacity regarding the first capacity values (See col.1, lines 62-64); characterized in that said one or more of said first nodes (Fig.1,16) comprises one or more second nodes (Fig.1, 20 and 21) each of the second nodes assigned to one of the first nodes is capable to perform one or more second node functions (node 20 or node 21 assigned to node 16 in order to transmitting data base on capacity performance), wherein said first node functions of the first nodes are provided by said second node functions, wherein providing one of said first capacity values for one specific first node and for one specific first node function and/or one specific combination of said first node functions (See col.5, lines 21-33), including the following steps: determining a number of second data path options for the second nodes of the one specific first node to perform said one specific first node function (See col. 5, lines 1-4), for each second data path option, the second nodes having one or more assigned second node functions (See col.1, lines 34-37), providing second capacity values for each of said second nodes and for each of said assigned second node functions (See col.5, lines 34-40); determining the overall capacity values of said second data path options with regard to the second capacity values (See col.5 lines 40-42);determining the minimum overall capacity value of any of said second data path options (Fig4B,

22,24); and providing the minimum overall capacity value as the first capacity value (See col. 5, lines 43-46).

Regarding **claim 2**, Cortez discloses a method according to claim 1, wherein the first node is included in a first network layer and/or the second node is included in a second network layer (See fig.1).

Regarding **claim 3**, Cortez discloses a method according to claim 1, wherein the second nodes are physical nodes (nodes 16, 18, 20 and 21 in fig.1 are physical nodes) wherein the second capacity values depending on a data processing speed, a data handling speed and/or a buffering capacity related to the assigned second node functions (See col.3, lines 8-10).

3. Claims 4, 5 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Jeffries et al. (Us Patent No. 7065045).

Regarding **claim 4**, Jeffries discloses a router device for determining a data path from a start node (Fig.1, A12) to an end node (Fig. 1, F 16) over a network (Fig. 1, network 10), wherein the network comprises first nodes(Fig. 1, A12) each capable to perform one or more first node functions, wherein one or more of said first node functions are to be applied on said data while forwarding said data through the network, said one or more of said first nodes comprise one or more second nodes (Fig.

1, B14) each of the second nodes assigned to one of the first nodes (B14 and C18 in fig. 1, assign to A12) is capable to perform one or more second node functions, wherein said first node functions of the first nodes are provided by said one or more second node functions, the router comprising: a first data path determining means to determine a number of data path options through the first nodes for each data path option (See col. 4, lines 52-57), the first nodes having one or more assigned first node functions (Fig.1, A), a first means for determining the minimum overall capacity value of any of said first data path options (See col. 5, lines 17-24) regarding first capacity values for each of said first nodes and for each of said first node functions and/or combinations of said first node functions (See col. 4, lines 59-66); receiving means for receiving said first capacity values for each of said first nodes and for each of said first node functions and/or combinations of said first node functions (see fig. 2, 54-58).

Regarding **claim 5**, Jeffries discloses a router device according to claim 4 further comprising a request transmitting means for sending a request for first capacity values for each of said first nodes and for each of said first node functions and/or combinations of said first node functions to each of said first nodes (See col. 1, lines 54-58).

Regarding **claim 13**, Jeffries discloses a computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing router functions, the computer readable program code means in

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said computer program product comprising computer readable program code means for causing a computer to effect the functions of claim 5 (See col. 7, lines 45-48).

6. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Derby at al. (U.S. Patent No. 5483522).

Regarding **claim 6**, Derby disclose a network node comprising: at least one subnode (Fig. 8, 74), each sub node being able to execute at least one function, wherein a subnode capacity value is assigned to each subnode and to each function related to the respective subnode (See col. 4, lines 1-4) , a request receiving means to receive a request for providing overall capacity values related to a set of at least one specific function able to be executed by the network node (See col. 3, lines 4-7), a data path determining means to determine a number of data path options for each of the functions of the set of at least one specific function to be executed by the network node(See col. 2, lines 64-67 and col.3, lines 1-3) , capacity determining means to determine an overall capacity value for each of the data path options and for each of the functions of said set of at least one specific function to be performed in the network node (See col. 3, lines 13-16), wherein said overall capacity values of each data path option are determined with regard to said subnode capacity values provided for each of said subnodes and for each of said assigned specific functions (See col. 3 line 67 and col.4 lines 1-3); and transmitting means for transmitting a minimum overall capacity value for each of the specific functions of the set of one or more specific functions and

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for the assigned data path option as the requested overall capacity value(See col. 3, lines 8-13) .

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cortez et al.(U.S. Patent No.7130262) in view of Jeffries et al. (Us Patent No. 7065045).

Regarding **claim 7**, Cortez discloses all of the limitations as applied to claim 1. Cortez does not specifically disclose an article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 1. Jeffries teaches an article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding (See col.1, lines 54-58), the computer readable program code

means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 1 (See col.7, lines 45-50).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

Regarding **claim 8**, Cortez discloses all of the limitations as applied to claim 1. Cortez does not specifically disclose a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a data path and forwarding data, said method steps comprising the steps of claim 1. Jeffries teaches a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a data path and forwarding data, said method steps comprising the steps of claim 1 (See col.7, lines 43-50).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

Regarding **claim 9**, Cortez discloses all of the limitations as applied to claims 1 and 2. Cortez does not specifically disclose an article of manufacture comprising a

computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 2. Jeffries teaches an article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 2 (See col.7, lines 45-50 and col.1, lines 54-58).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

Regarding **claim 10**, Cortez discloses all of the limitations as applied to claims 1 and 2. Cortez does not specifically disclose a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a data path and forwarding data, said method steps comprising the steps of claim 2. Jeffries teaches a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a data path and forwarding data, said

method steps comprising the steps of claim 2 (See col.7, lines 45-50 and col.1, lines 54-58).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

Regarding **claim 11**, Cortez discloses all of the limitations as applied to claim 3. Cortez does not specifically disclose an article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 3.

Jeffries teaches an article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 3 (See col.7, lines 45-50).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

Regarding **claim 12**, Cortez discloses all of the limitations as applied to claim 3. Cortez does not specifically disclose a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a data path and forwarding data, said method steps comprising the steps of claim 3. Jeffries teaches a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a data path and forwarding data, said method steps comprising the steps of claim 3 (See col.7, lines 45-50 and col.1, lines 54-58).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

Regarding **claim 15**, Cortez discloses all of the limitations as applied to claim 14. Cortez does not specifically disclose a computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing data path optimization and data forwarding, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the functions of claim 14. Jeffries teaches a computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing data

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path optimization and data forwarding, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the functions of claim 14 (See col.7, lines 45-50 and col.1, lines 54-58).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount computer readable program taught by Jeffries on to the data path service as shown in Cortez in order to perform communication so that the systems run more efficient.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMTIN KANGARLOO whose telephone number is (571)270-3452. The examiner can normally be reached on Mon to Fri 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571) 272- 3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RAMTIN KANGARLOO/
Examiner, Art Unit 2619
April 5, 2008

/Chirag G Shah/
Supervisory Patent Examiner, Art Unit 2619